

Role of P2X receptors in positive inotropic effect of rat myocardium during ontogeny

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Abstract

Experiments with selective agonists and antagonists of purinoceptors allowed us to evaluate the subtype of P2X receptors. We showed that the myocardium of 14-100-day-old rats contains functionally active P2X 1 receptors. These receptors are involved in the realization of the positive inotropic effect of the atria and ventricles. Selective P2X 1 receptor agonist β,γ -methylene-ATP induced a dose-dependent increase in the strength of atrial and ventricular contractions. P2X 1 receptor antagonist TNP-ATP abolished the effect of the agonist in rats of all age groups. © Springer Science+Business Media, Inc. 2008.

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Keywords

Myocardial contractility, Ontogeny, P2X receptors